Welcome and thank you for standing by. At this time, all participants are on a listen-only mode for the duration of today's conference. This call is being recorded. If you have any objections you may disconnect at this time. I would now like to turn the call over to Dr. Don Workman. Sir, you may begin.

Thank you. Welcome and thank you for joining us for the November webinar. My name is Dr. Don Workman, and I am the chief of the Emerging Technologies Program at the National Center of Telehealth and Technology, T2. I will be your moderator for today's webinar.

Before we begin, let's review some webinar details. Live closed captioning is available through Federal Relay Conference Captioning. Please see the pod beneath the presentation slides. Today's webinar is hosted using the Defense Connect Online Platform. Should you experience technical difficulties, please visit dcoe.mil/webinars to access troubleshooting tips. There may be an audio delay as we advance the slides in the presentation. Please be patient as the connection catches up with the speaker's comments.

During the webinar you're welcome to submit technical or content-related questions via the question box. The question box is monitored, and questions will be forwarded to the moderator for inclusion during the question and answer session during the last half hour of the webinar. Our presenter and I will field as many questions as time permits. Please note that continuing education credit is not available for this event.

I will now move on to today's webinar topic, "Integrating Mobile Technology Into Existing Treatment of Psychological Health and Traumatic Brain Injury." There are many new technology solutions to improve the lives of our nation's warriors and families affected by psychological health concerns and traumatic brain injury. The goal of this webinar is to assist the health-care provider in knowing what innovative tools are available to empower and/or involved patients in their care and treatment.

Additionally, this presentation will guide understanding of tools applicable to different target populations and offer a provider-centric view about a variety of technology tools which can help minimize or eliminate short and long-term adverse effects of TBI, as well as mental health conditions associated with military service.

Webinar participants will learn to discuss how to integrate new technology tools into current practice with TBI patients, articulate what the term "mHealth" means and the resulting impact on evidence-based clinical care, and name three specific psychological health or TBI-related problems and discuss applications which may enable or improve or enhance cognitive function.

Today's presenter is Dr. David C. Cooper. Dr. Cooper is a research psychologist with the Mobile Health Program at the National Center for Telehealth and Technology. He serves as a project lead for mobile applications related to improving military and veteran psychological health and TBI. Dr. Cooper leads a team of software developers, usability researchers, and graphic designers to create, develop, and deploy mobile and web-based apps. Additionally, he providers subject matter expertise on the use of technology in conjunction with the treatment of psychological health and traumatic brain injury issues.

Prior to joining T2 Dr. Cooper worked as a clinician in the fields of neuropsychology and in neurorehabilitation. He also developed and deployed digital strategy solutions for the federal government, as well as national associations. In his spare time he is a co-organizer of the Quantified Self, Seattle, part of a national movement of individuals looking at the application of personal data collection for increased health benefit. Thank you for your participation and welcome, Dr. Cooper.

Thank you, Dr. Workman. Again, hello. My name is Dr. David Cooper, and I am a psychologist here at the National Center for Telehealth and Technology, or T2 as we like to refer to it, since the actual name is a mouthful. Again, I am clinical psychologist with a background in neuropsych and TBI rehab. And now I'm working to develop applications that will help integrate psychology and technology, with specific focus on helping patients both on their own and helping patient as they work with providers. So today I'll be giving

you an overview of some applications and new technologies that I think will be useful in enhancing existing treatment of psychological health and TBI.

So, again, the overviews today, we're going to discuss how these tools can be integrated with your existing patient care, looking at a few of the up and coming technologies, talking a little bit about what the future could be. I'll tell you what mobile health is, how to integrate it into your practice, and, really, why you should care about mobile health. I know personally every time I hear a new ten-cent buzzword from somebody I tend to tune out and think, "How does this really apply to me." But I think that mobile health, or "mHealth," as we call it for short, really has the potential to change a good deal of how we interact and care for our patients.

And, yes, I do realize that's what everyone says when they trot out a new buzzword, but I want you to know that I really mean it when I say I think it really will change how we work. And to show that, I'll look at specific apps and how they can be applied to specific problem areas, both for psychological health and TBI. We'll talk about how these apps can fill missing needs or even just augment your existing treatment. And at the end of the presentation, I'll sort of change direction and take a deeper look at one application in specific, our T2 Mood Tracker. We'll look at the features of the application, how it can be used in practice, and then how to introduce it and use it with a patient.

So just a quick disclaimer before we begin, I'm going to be talking today about a few products, some from the government and some from private companies. I want to make it clear that I'm not specifically endorsing any of the private-sector products. Rather, I just want to use them as being illustrative of the wide range of applications and products that exist in the field. So if I were to include all the available products I would certainly need much, much more time. Whenever possible, I've tried to recommend products that are free; however, many of them do have some initial cost.

And I think that it's also important to mention that while the private sector has really embraced a lot of these devices and apps, many of them will only work -- if you're working in the military population, many of them will only work on service members' personal devices and not on official military sanctioned mobile phones, or maybe even through your own networks. So what that means is, depending on your location policies, you may be unable to access particular websites or download certain apps to your official devices. That's just, unfortunately, not something that we can help. A lot of this technology is so new the regulations are having trouble keeping pace with is, as we can see from the recent FDA push on mobile applications. So with all of these, just sort of provider beware, I suppose, in making sure they're applicable to you.

So let's jump right in with a big question, you know, what is mobile health and why should I care? Mobile health, again, mHealth for short, is really just an extension of what we're already doing. It's evidence-based care by other means. Just like Telehealth is taking what we do in our clinics and bringing it to our patients over video, mHealth can be considered doing the same thing with mobile apps and websites. So what this means for you is that with mHealth you'll have access to data that you previously wouldn't have access to. You'll be able to get access to your patients outside the clinic. Have access going forward to clinicians by the patients. Oh, slides are a little out of order. Let me jump ahead here.

So some of the tools – before some of these tools existed, you know, I would certainly think it would be nice to have that data but there's no way I can ever get, like, honest reporting of how my patient is sleeping during the night or their activity level, how much they're moving around. Previously I would have to rely on a patient being able to recall how they were doing over the week or trusting that they would be able to keep a sleep diary. Well now, with mobile applications in some of these devices, we can make that much easier to do or, in some cases, you can record sleep activity with little or no interaction from the patient at all.

It also means you'll have access to more ecologically valid data. I mean how many times have we all asked a patient to track mood in between sessions, given them a handout, and then, before the next session, we see them filling it out very furiously in the waiting room ahead of time? So now that doesn't really help me because I really want to know how you're doing during the week. With a mobile application

we can ping them throughout the week with a device that they are sure to have on them and be able to get that data in almost real time.

And in keeping with the behavioral health home model, it will mean that patients will have better access to their clinicians. So, for example, in one of the applications I'll talk about today, patients can really take charge of tracking their own symptoms and use the application to send those results to their providers ahead of time, interacting in what we call the "white spaces" between clinical appointments.

So just to cover a few quick terms for those who maybe are less technologically inclined, when we talk about mHealth, we'll be talking about phones and tablets, those are the actual devices themselves. And we'll be talking about apps, and that's the software that runs on those devices. You will commonly hear four major players talked about in terms of both devices and applications: Apple or iOS; Google, also known as Android; Blackberry; and Windows. Each major player has their own kind of device, and the apps from one kind of phone won't work on the other kind unless there's a version specifically made for that phone.

So here at T2 we've tried to focus on the two primary platforms, Android and Apple, to make our applications, and most everything that we do here, with a few minor exceptions, we make for both kinds of devices. Other people, like the VA on the other hand, are really focused on just supporting the Apple devices. So it's really up to the individual organization or company who they make apps for, and it's not always guaranteed you'll find one app that works across every device.

Lastly, I want to talk about wearables, and what I mean by that is the new technology of devices like the Fitbit, and other devices that are meant to be worn regularly and collect data on the user pretty much 24/7. So we'll talk a little bit about wearable devices.

So why should you – again, I'll cut right to the chase, why should you care? What the heck is going on with mobile apps and smartphones, all these kids with their "Bookface" and "Tweetster," you know who really needs this stuff? Well, the use of these devices is increasingly expanding. With some of the older generations being more the fastest-growing adopters. People are using their phones more and more, and as of 2012 almost half of all Americans had access to the internet through a mobile device. Smartphone use is on the rise, and that's both in the public sector and in military.

We've done some research here at T2 to look at military technology usage and what we found is that it pretty well mirrors what you see in the private sector. And what we see there is, increasingly, patients are looking for more tech savvy care. And if the recent rollout of healthcare.gov has really taught us anything it's that citizens are going to start holding the government to the same technological standards that we find in the private sector. So, really, the bottom line is that our patients are getting more and more savvy and will expect us to respond.

I could ask how many of you – thinking about how many of you , before you go see your doctor, will visit WebMD and research things ahead of time, come in with printouts and ideas already, you know, formed? Just like we are doing more of that, we can expect it more in our own patients. It really follows -- mHealth really follows a model shifting from, you know, the provider as lordly experts to focusing more on the patient taking a greater role in their own care. Now, instead of EHR, electronic health records, we're talking about PHRs, patient health records, that the patient is collecting all this information and managing on their own. And so with things like patient health records and mHealth the patient can become more of a partner in care rather than simply being a passive participant.

And, lastly, again, you know, mHealth can offer us more ecologically valid data on our patients. So, again, rather than asking a patient to recall in your office how they've been sleeping on the spur of the moment, you can review relatively good data with them to help troubleshoot possible problems and really get an understanding of how they're doing at night.

So to begin with, I'd like to talk, jumping into some of the tools that are available. And I want to start off with some general PH and TBI resources that may be helpful when working with patients. So mHealth

doesn't necessarily mean just apps and smartphones. Websites that can be accessed on the go are part of that now. Our afterdeployment.org website and its companion app, LifeArmor, can both be accessed on the go and be considered part of mHealth.

Within AfterDeployment, if you're not familiar with the website, we have it broken down in sections on different topics, sections on PTSD, anxiety, substance use, and even mTBI. Each section includes things like workbooks, general information to help people learn more about the topic areas. And one of the really nice things is, where possible, we've tried to include these videos, where we interview actual service members dealing with these issues. This way we feel that we can provide, you know, a more legitimate source for the person to say, "Yes, that person knows exactly what I'm talking dealing with and can understand where I'm coming from."

A lot of times these are being used for group sessions. Groups will work together through different modules after deployment. It's also good for family and friends to educate themselves on these issues, recommending them to spouses, to family members when you have a patient struggling with PTSD or TBI to learn more about what's going on so that they can help the person out. Sites like AfterDeployment are a really good resource for that.

Specifically for mTBI, we have the mTBI Pocket Guide app. It's a collaboration with DVBIC, the Defense Veterans Brain Injury Center. It's a pocket tool that comes with resources, clinical recommendations, coding, even symptom management tools to help specifically give you information about mTBI on the go. If any of you are using Epocrates or other similar medical tool apps, it's sort of like that, just a quick resource to have in your pocket as you transition from office and from patient to patient.

Also, we know that when we deal with issues like TBI and psychological health, we're not just talking about the person in front of us, we're really talking about the whole family system. And in that, often kids get really overlooked. We have a website, Military Kids Connect, that is designed specifically to address the needs of military children and the unique stressors they have in their life. One of the really nice elements of Military Kids Connect is what we call our "tough topics" videos, and those are designed to help kids understands things like PTS, grief, physical injury. Starting next week we'll actually have an mTBI tough topic video series for kids to understand what's going on when a parent has a TBI. It's really nice because, again, it allows you to involve the whole family in care and really serves an overlooked part of the family when we talk about caring for someone with a psychological health problem or even a TBI or a physical injury.

So that's it. I want to get right into talking about applications for specific problems. I'm going to talk about applications that go for – applications for memory issues, for dealing with chronic pain, executive functioning problems, general behavioral health problems, as well as sleep. All of these kind of feed back in on each other, so I want to touch briefly on each of these in turn.

So let's talk about memory. It's a common issue, both in TBI and in psychological health at times. Anxiety can cause memory problems, and memory problems can cause anxiety, so it really is an issue that is important.

A really nice application that I like and have used with patients in the past is in the application called "Evernote." If you sit in on any of these presentations you'll probably hear this one come up time and time again. And if you haven't taken a look at it, I really do recommend it. The nice thing about Evernote is it's really designed to function, as I like to call it, an "exocortex," a part of my brain that sits outside of my body. It remembers everything for me so that I don't have to. So here you're actually seeing my Evernote, and I've been using it to clip some articles from NIH and PubMed, so using it to do research. You can clip websites, images, record audio notes, make to-do lists, and just write general notes.

And the nice thing is it's all saved online and will sync across mobile devices, whether you have Apple or iPhone, or even are sitting at a desktop or laptop, you'll be able to access all of your notes on the go. You can tag notes with certain hashtags, if you're familiar with that. So I can tag all of my financial to-dos with #Financial and then easily sort, find those, and search through all my notes. So if it's around a meeting I

went to last week I don't have to scratch my head and say, "Who was that? What was their name?" I can just do a quick search and it can bring up those notes for me.

You can scan in documents and images. It will automatically recognize the text in both images and documents, making those searchable. So if you have a patient who wants to use their phone to document where they're going they can simply take a picture of a restaurant or a place with the name in the picture, and Evernote will actually read that and then be searchable. So you say, "Oh, Applebees," type in Applebees, and there's a picture of Applebees that you went to and the date and time that you uploaded the picture. So it really does become a nice backup for your memory and letting you remember pretty much everything that happens to you.

Like I said, it's available on Android and iOS devices. It's available on the web, so you can access it from anywhere and just about any device. Save just about anything, e-mails, webpages. There are add-ons, so you can do notes for studying, reading, clipping things straight from your browser. It really is a nicely supported application with lots of ways to get information in, which is what you really want when you need something to help you with your memory.

Let's also talk about pain. Chronic pain is an issue, of course, with a lot of our folks. One really nice application for pain is the WebMD Pain Coach. It allows patients to track their pain, rate symptom severity over time, learn how to associate it with different triggers, see how they've been doing in the past, and send those details to you as a provider. They can e-mail you a report of how they're doing.

Again, I know for many of you maybe getting an e-mail from your patient is a little bit trepidatious. I have to admit that I would also be nervous about it. And I know some places don't even allow for that kind of information to be sent over email. However, it is something that is increasingly happening in the private sector, so I felt it's important to bring up here as it will only become more and more of an issue with your patient. They will want ways to interact with you offline and outside of the session, so really putting some thought into how are you going to address e-mail with a patient, how are you going to talk about boundaries use. I know a lot of this, none of us are necessarily trained in in clinical practice, and I wish I had some really hard and fast guidelines for you, but, unfortunately, it's one of those areas where you have to follow not only the policies of your particular clinic but using your clinical judgment as well as what is going to work best with what patient.

Executive functioning problems can also be an issue, particularly in TBI, memory problems, figuring out what I need to do next, often an issue. Even after mild TBI, after concussion, you're going to have somebody that needs just a little bit of extra help with their executive functioning. What I've found with patients is to-do lists work really well with this. It allows us to plan things ahead of time in a session. So if I have a patient with executive functioning problems and we're talking about, "Okay, you need to go to the store, what are you going to get," writing all that down in session, thinking through what are you going to get first, what are you going to get next, how are you going to make sure that you've got everything before you check out, all of these things can be used in a lot of to-do list applications. They're good for reminders, "Don't forget to take your pills, take your medication," "You have an appointment tomorrow," as well as for sequencing, if you have a patient with sequencing problems, "Here's how you make the coffee. First you take this out of the cupboard, and then you measure out exactly this much." And so you can save that as a regular to-do list that they can just click through and make sure that they've crossed off every step.

There are a lot of to-do list applications around. Two that I like, again, mostly because they are widely available and free, are Remember The Milk is a very nice one. One of the really great things about Remember The Milk is that you can add things in what we call "natural text." So I can say "Remind me to call my pharmacist tomorrow," and Remember The Milk will say, "Okay, I know what today is, I'm going to put in a reminder for tomorrow at 9:00 a.m. for you to call your pharmacist." You don't have to actually punch that in, it does that all behind the scenes for you. And that is available for both Android, iPhones, and on the web. Similarly, so is another application called Wunderlist. It works in a lot of the same ways. Again, having those recurring texts, subtexts, so you can really plan things out in a great level of detail for whatever your patient needs to be able to work with them on their executive functioning issues.

So I want to talk a little bit about behavioral health issues since that's kind of one of the things that we focus here at T2 and what a lot of our applications are for. I'm going to switch to talking about some of our applications that we've built here at T2. All of our applications are free, and, again, with a few minor exceptions, are available for both Android and iPhone smartphones.

One application that I'll talk about briefly just to introduce and then talk about more later is our T2 Mood Tracker. I'm sure many of you are probably familiar with the standard mood rating sheet and giving a client a handout to track their mood over the week, and having them come back and then talk about it during the session to see how well they're doing, either with therapy or responding to medication, or even just in general.

The nice thing with T2 Mood Tracker is it replaces that paper sheet with an app that will always live on their phone. Again, I can't tell you how many times I, as a provider, have had patients lose the handout, not take it with them, fill it out ahead of time, and I think that's kind of frustrating to me as a provider, because what I really want is for you to tell me how you're doing during the week and also for you to start tracking these things so that you can see what kinds of things affect your mood. And that's really what T2 Mood Tracker does. Again, I'll go into this in great detail later. So let me skip onto the next application here.

Another application that we have is Breathe2Relax. As a provider I would teach just about every patient that came to see me how to do diaphragmatic breathing as a way to control anxiety and anxious symptoms. That would take me usually about two to three sessions of checking in with them, working with them in the session, teaching them how to do it. Now, with Breathe2Relax, what I have is a self-contained tool to teach diaphragmatic breathing that I can provide a patient before they even come to see me. From the moment they contact my office to set up that first appointment I can close and say, "Oh, by the way, sounds like you're having some issues with anxiety, I want you to go check out this application and use it for a little bit before our first session," or before they even do the intake to be able to give them some of that evidence-based relief for anxiety by giving them that standard tool. And then you, as a clinician, can really focus in the session about more substantive issues and to check in to see, make sure it's going okay.

The application is customizable. There is soothing music, pictures. You can change the inhale and exhale rates. There is informational videos about how to do diaphragmatic breathing, about the stress response, about what diaphragmatic breathing does. So it is really a nice self-contained tool that goes above and beyond just a handout or training within the clinical session, taking the best of both of those and giving it to the patient on the go.

One of our more niche I guess applications is this application called BioZen. This is one of the few applications that is only available on Android smartphones. But what it's designed for is to assist with bio- and neurofeedback. Having done this in a clinical setting before, one of the really difficult things was often there was a laptop hooked up to wires and sensors on a dolly that I would either have to protect time, because it lived in a special room, or else wheel it from office to office. It was really rather cumbersome to set up and use.

With BioZen there are a number of devices on the market now, commercially-available devices, that use Bluetooth to measure EEG, galvanic skin response, EKG, respiratory rate, temperature, all the kinds of things that we would typically measure in biofeedback but do it wirelessly. And now, instead of having a specialty laptop, you, as a clinician, can just take your smartphone with you from office to office, use that to connect the patient up, and show them the same kinds of things you would on a laptop on your smartphone. There are graphs to show the raw data, nice visual pictures to give them an idea of doing neurofeedback, how well they're concentrating. Or even, if the patient is interested, buying a device of their own and doing this at home. In that route I think the devices themselves run anywhere from about $100 to $200 depending on which kind you're getting. But I think this -- for those practitioners and patients who are interested in using bio and neurofeedback, I think this really is a nice step forward in terms of what we have traditionally had to use.

PE Coach is one of our applications that's a little bit more specific. It's targeted to not be used by a patient on their own like Mood Tracker or Breathe2Relax could be. PE Coach is really designed to augment traditional therapy using prolonged exposure. So it's really meant to be used with a clinician. You can record session homework, record session responses so that the patient can take it with them. There's a therapist guide that we've made that goes along with integrating PE Coach in practice. You can do assessment results tracking. It's accessible. And one of the nice things is it is confidential and convenient. That is something that I think apps represent a good step forward in terms of confidentiality when we're talking about giving patients homework to take with them.

Unless I'm standing right over your shoulder, I'm really not going to know if you're on the phone checking Facebook or looking at your exposure therapy homework learning about PTSD. And, additionally, patients usually lock their phones. I'm sure every one of us has some kind of passcode lock on your phone. And if you don't, I'm going to wag my finger at you and say you very well should so that the device is secure from prying eyes, as opposed to a handout that someone may leave sitting out in the open or, you know, in a purse it may fall out and is much more easy to read and for someone to say, "Hey, what are you doing? What's that you're reading?" It's harder to say, "Well, I'm just reading a newspaper" or "I'm reading a news article" with a handout than it is with a mobile app.

PTSD Coach is similar. It's a collaborative app that we've developed with the VA's National Center for PTSD. This is designed to kind of straddle the realms between using something on your own and using something with a provider. PE Coach features self assessments. It helps people track symptoms. It helps them manage their symptoms with built-in coping tools. It offers immediate support so if someone is in crisis there's easy access to hotlines, and as well as can be customized. We're being asked constantly by other international audiences whether or not they can use this for their own military population. There's a PTSD Coach Canada, Australia is looking at one.

The nice thing about an app like PTSD Coach is, again, it really straddles the line between something someone can use on their own and use with a provider. So either this is something you as a provider can use to augment, give your patient resources to use outside of the session, or if you have a patient who's maybe more contemplative, not ready to address that they have PTSD, this is a good way to give them just kind of an informational resource to do a little bit of learning on their own about what is PTSD, what are the signs and symptoms. They can take self-assessment to see, "Might I have PTSD." So it's a nice balance between a patient who's much more engaged in treatment and maybe someone who is less engaged.

Sleep, of course, is a big issue now both clinically and not. I know, especially a lot of our younger service members, have trouble with sleep issues. Of course when you're sucking down two or three Red Bulls a day, it is unusual to wonder why you do have trouble getting to sleep at night. So there are a number of applications and devices that can be used for tracking sleep. One is a application, again, that we've developed with the VA, it's using CBTi, cognitive behavioral therapy for insomnia.

So CBTi Coach is, again, like PTSD Coach, a nice application that can either be used by someone who maybe can't get into a clinic right away or is just considering that they might have sleep issues, as well as in a more active to help them actually treat their insomnia. You get sleep prescriptions. There are self assessments, again, information about good sleep hygiene, and, again, a really kind of self-contained tool for using evidence-based cognitive behavioral therapy for insomnia.

Another device, now we're getting into the wearable devices, and these are private sector devices, you may have seen things like the Fitbit or, here, we have the Jawbone Up. What this is is a device that's made to be worn around your wrist and will track a person's sleep, track their movement as they sleep to get you really good quality data about how they're actually sleeping. One frustrating thing for me was if I had a patient with sleep problems -- of course, we often refer them for a sleep study, but my question is always how accurate is that data in terms of how they're actually sleeping at home? And when you go in for a sleep study you're in an unfamiliar room, you have all these wires hooked up to you, it's not really conducive to a good night's sleep. I think you have to be really a special person to do a sleep study well.

But with something like a Jawbone Up the person can track this on their own, and you can really see that data of what time are they going to bed, what time are they getting up, how well are they sleeping, how long were they in deep sleep versus light sleep, when were they awakening during the night, how many times? You get really nice data that can be used to go back and look and talk with a patient, "Okay, what was going on that day? What happened that night," as well as giving the patient valuable feedback and reminders about how they can sleep better and what they can do to improve their sleep.

Like the Fitbit, the Jawbone Up also tracks activities, so it's also a step counter, and is good representation of the devices available. There are a number of these. I don't want to single out necessarily just the Jawbone Up. Of course, there's also the Fitbit Force, which does similar things. Fitbit has a number of products that are available. And that is always a question with some of these devices is finding ones that are available -- commercially available. Things like BioZen, there are very few commercially available devices. I believe the company called NeuroSky puts out several EEG headbands. There's a company called Shimmer that makes a nice research module that can do some of the more biofeedback stuff. Again, those are in the similar kind of price range of $100 to $200. So, you know, as much as I would love these to be free and openly available, we are getting into the realm where some of these things do cost and add an extra expense.

However, you may very well have a proactive patient who has a device like this on their own to track their own fitness. So thinking about how to incorporate it into treatment is really helpful and familiarizing yourself to the wide variety of devices out there. I think Dr. Workman is wearing his on his Fitbit, and I'm wearing my own tracker here. So we're exactly the kind of nerds that are doing this sort of stuff on our own. And my last checkup I did take my data into my provider so he could see resting heart rate activity, how well I'm sleeping, just so he had that additional data to make a decision.

So let's talk a little bit about what's coming up. What we've talked about now are things that are all readily available on the market, but I want to touch on a few newer technologies. At T2 I think Dr. Workman and I both would feel that we are not doing as much as we could if we didn't talk a little bit about innovation and where we see things heading. So looking down the road, what we're going to see is a lot more in terms of the wearable devices; that is something that's really popular right now and really exploding on the scene.

So not only are there things like the Fitbit and the Jawbone Up to track sleep and activity, a new device coming out at the end of this year is what's called the Narrative Camera. So if you look at the picture of the guy, the orange thing on his shirt is a little camera that's designed to be worn all day and takes a picture every 30 seconds. Those pictures are tagged and uploaded to a service that you can then browse to get what we call a "life log" of your day.

For me, this kind of thing makes me really excited, particularly in terms of my work with TBI patients. Many times I had patients with aphasia or who had memory problems, had difficulty communicating to me how their week had gone, what they were doing. With something like this, I now, in the session, can actually rewind like a VCR their week and see what were they doing, where were they happening. That fight they had with their mom or dad, what was going on right before that? When they got lost, where were they, what was their strategy? And, to me, this gives me a lot more data, a lot more accessible data; that it's clinically relevant to me and can help me really kind of help them, in terms of psychological health, figure out emotional triggers, figuring out good coping tools.

And in terms of TBI, similar to Evernote, giving the patient an easy record of their day. You don't have to think, "What was the name of that person I saw". You can find the picture, tag it with the person's name, and then automatically, "Oh, yes, that person, I remember their name, I remember their face," and reintroduce that to the patient. Again, our visual memory is the best kind of memory we have. So this kind of visual reinforce is going to be really good for patients with much more severe TBI issues.

Another neat tool that's coming out, either late this year or early next year, is what's called the "Muse headband." So when I was talking about BioZen, this is the kind of sensor that you can see that would connect wirelessly to a phone or device. The Muse headband is designed to be worn stylishly, as you see

the man there, looking a little bit like Olivia Newton John, but designed to be kind of like the Fitbit, which you wear all day to track your movement and sleep. The Muse will do the same for EEG and being able to give you brainwave information. So, again, this becomes critically important, particularly for TBI patients, and getting us some of that data of how the brain is healing after an injury, how they're doing. If you have patients who are at-risk for seizures, tracking that through the day. I think tools like this will become increasingly helpful in terms of clinical practice and really open up interesting opportunities for us, not only in treatment but to actively engage in treatment. Again, I can see a tool like this connected to your phone, and if you are a patient with a seizure disorder after a TBI, it can warn you ahead of time, potentially when you might be experiencing epileptiform activity. So, giving you kind of a warning before seizure hits.

The Basis band, this is another tracker. This is actually available right now, but I wanted to show it in terms of what's coming up to give you an idea of the kinds of data that will be available. With things like the Fitbit and the Jawbone Up they're pretty simple movement trackers. A lot of what they rely on is just movement to track your steps to see whether or not you're sleeping. Something like the Basis band, you have that movement, what we call an "accelerometer sensor," you have that sensor built in, but in the form factor of something the size of a watch, you are also taking skin temperature, heart rate, galvanic skin response, a number of different sensors to give you a much richer sense of the person's data. So in terms of activity level, adding in things like your temperature and your heart rate gives you a much caloric burn, so if you have a patient who is also trying to lose weight this is important.

Measuring your heart rate throughout the day, when I got my Basis band one of the first things I did was look at my heart rate throughout the workday and then match it up with my Outlook calendar. Wow, my heart rate really spiked there, what was going on? Oh, that was when I was in the director's brief. So, clearly, there was something about that that made me a little bit anxious that I need to work on. Tracking those things throughout the day.

And, similarly, does things like sleep, whereas things like the Jawbone Up and Fitbit you kind of have to tell the device you're going to sleep, the Basis automatically recognizes it based on time of day, the fact that your body temperature is going down, and that you're not moving a lot. So it really takes even more of the, I guess, impetus off the user to track their data and starting to do it automatically.

So I think showing you these kinds of things are really interesting in terms of what's coming up. Here you can actually see some of the data from -- this is actually from my Basis. So with a kind of data dashboard like this I, as a clinician, or even just myself, can review throughout the day and look at some of these spikes. Here we've got a big spike in heart rate you can see there towards the end. So I can say, "Yeah, what is going on there? What was happening? Is that just a glitch or is that, you know, an anxiety symptom, a panic attack that I need to take a look at and really dig into what was going on there?" So they can give you a lot more interesting data to look at as a clinician.

So now what I'd like to do is switch gears a little bit and really get into looking at a specific app, our T2 Mood Tracker, and how it can be used with a patient. That's one of the questions we always with this, "Yeah, that's really cool but how am I actually going to use this with a patient? What does this app do? How do I use it with a patient?" So let's start by giving you a quick overview, screenshots of some of the important features, talk about how to use it with a patient, and even how to get some of this data into AHLTA into the official record.

So, again, T2 Mood Tracker, here's our kind of overview slide again of our self-rating tool with prepopulated categories. You can add in notes, see your results, send your data to your providers, and really kind of enhances our treatment as usual with what we've been typically doing on paper. Again, we've all kind of seen these paper mood tracking sheets we've handed to folks. They get lost. People don't carry them with them. But with a phone, with an app on a phone, the patient always has that with them. People even sleep with their phones. I use mine for my alarm to get up in the morning, so it's always with me. It's much easier to fill out. You don't need pen and paper, you can just quickly do a slide rating of moods, as we'll see.

So what this means for you as a health-care provider is that you're more likely to get ecologically valid ratings of a mood as it actually happens rather than just them recalling it in your office or right before, which means the results themselves will be more meaningful to you in terms of helping the patient figure out what is causing their mood symptoms, what is affecting their mood symptoms.

So when we open T2 Mood Tracker you'll see the main screen, it looks like this here on the left. And then that will quickly go into the overview of the different rating scales. We've prepopulated the app with some rating scales like anxiety and depression, PTS, and head injury. But all of these rating scales are customizable, both the prepopulated ones, as well as you as a clinician can make your own. Either you can work with the patient, or the patient can, on their own, make new ratings scales to track symptoms of interest. And you'll see that as you go through and click into these it'll let you know what you've rated and what you haven't. Also, up at the top there, you can see how to navigate to other parts of the application. We've got results which will let you review your rating scales and generate reports. Support, where you get help functions and settings as well.

So what do the rating scales actually look like? Well they're visual analog scales. A quick slide left or right, do you feel more tense or do you feel more relaxed? We like this better than using actual numbers like an actual Likert scale from one to five, because I think it helps patients keep from focusing on the numbers themselves. You know, "Well I was a five last time, am I more of a four now or am I more of a five?" It gets you more of an in-the-moment rating when the patient kind of has to look and see do I feel more anxious or calm? You can quickly go through here, hit "Save" when you're done. For each of these you can also add in a note to give contextual information, what was going on at the time, "I was at work." Where were you when you rated this? Was there anything particularly stressful happening? And, again, these are customizable, so let's look at that.

So for each of these, you can add in personal categories to each rating session using either the settings function or clicking the option function on the phone will bring up the ability to add rating categories or edit them. You can name them whatever you want. Define whether or not the category is desirable or not, so that will change how it's displayed on the graph, whether high is good or high is bad, let you know how that's displayed on the graph. And then you can, again, use the option button to add in new scales. Usually they're diametrically opposed, so you can either be, am I more happy or sad, or it can be something as simple as "more sleep," "less sleep," just kind of giving you an option of where you fall between two endpoints.

So here you can see how the results are viewed. So the nice thing about it is you get a nice graph built into the application that shows you your results over time. You can choose which scales you want to see, what timeframe. You can pinch and zoom, kind of adjust over the time period that you want to see. And you can also see notes that are attached to individual ratings. One of the really nice things, again, about Mood Tracker is that you can save results. So you see there "Create reports and save reports." So, as a patient, I can create a report of specific scales over a given time period, the last week, that will get saved either as an Excel file or PDF that I can either save on my own or even email to my provider ahead of time.

So, for me, what this means is it really brings into mind a patient that I had where she was on about eight different medications, mood symptoms all over the chart, but the problem was I could only see her about once a month, because she lived in a very rural area. And one of my first recommendations was that she go seek a psychiatrist near her to do some medication reconciliation to really help with her mood symptoms, because just the cross-effects of all her different medications, I was like, "No wonder you're all over the place in your mood." I could have really used something like Mood Tracker to check up on her in between those sessions rather than just seeing her once a month, being able to check in at one week, two weeks, "Hey, how is it going? How is your mood doing? Is it getting better or worse? Do I need to do kind of emergency intervention and get you in here sooner or are you doing okay?" And, again, something like Mood Tracker gives me more data than just having to ask her over the phone of how you're doing. Now I've got not only how is she doing over the phone but I can have her rating throughout the week and see exactly how she's been doing.

So when someone does want to send this to a provider it's built into the application. You can go to "Save reports." It's going to ask you, "Would you like to create a report". You go through creating it. Again, you can e-mail this. It can be in an Excel file. If you're an incredibly nerdy person and want to do your own graphing, you can an Excel file just like with any other data, or a PDF file. You can see there a screenshot on the far right. We've kind of built it in so that it breaks up each category into its own little line graph to really track how that mood symptom has been doing over time. And that's a really nice quick easy thing to look at, especially as you -- you know, again, if you're anything like me and maybe only have ten or five minutes if you're lucky between sessions to kind of review this information, you don't want to be sorting through an Excel file. You just want a quick look at are they doing well or are they doing poorly.

And so with this PDF version, the really nice thing is that you can get that into AHLTA. You can use a screenshot tool in Microsoft -- I'm sorry -- in Adobe Acrobat, Adobe Reader, to clip these. I may not get into that, it's at the end of this presentation. I've only got five minutes left here before we start the Q&A, so I want to talk really a lot more about introducing apps with providers so -- I'm sorry -- with patients.

So with any tool like this application, how do you start using it with a patient? You know, the first thing you do have to do is assess how comfortable they or even you are using this kind of technology. Do they have a smartphone? Are they comfortable using it? For patients with TBI, getting them engaged in a smartphone and learning how to use their smartphone may actually be very good and beneficial for recovery in terms of building up their long-term strategy. Is the patient interested in using an app? Concerns about privacy and confidentiality are always very important.

With T2 Mood Tracker one of the nice things is you can set a PIN lock on Mood Tracker, so not only is the phone protected, the application itself is protected. Unfortunately, we don't send the emails encrypted, that is kind of part of our workaround about how we can get that information to providers, but it is something that we are looking at and taking very seriously, how do we keep this patient information protected. Talking about the benefits of using an app, what is the patient going to get out of it? Even seeing if they're already using applications, again, what are they using right now and can you incorporate that into treatment rather than even adding something new?

It's also important, as you use an app with a patient, to check in regularly. Is there something -- you know, is there something that is working for them? Would another app maybe work better? Would they be interested in adding other apps to their regimen? Not all apps are going to appropriate for all patients. Some people are going to prefer paper. Some people are not going to be able to use it because of physical limitations. Although I certainly love apps, I don't want to sell them as one-size-fits-all and a panacea that's going to be everything. And there are also more apps created every day, so, as much as I love T2 Mood Tracker, I also realize there might be something else down the road that is going to be better, and so would you want to use that in a clinical setting rather than Mood Tracker.

A little bit -- I've got about two minutes left, so let me quickly talk again about getting this into AHLTA. So that's one question we have a lot from clinicians is how do I incorporate this in the actual record. So with a PDF, if the patient sends you a PDF file, you can open it up, zoom into about 75%, find the scales of the data that you want to include. If you go up in Adobe Reader there is a snapshot tool. It's under the "Edit" menu. You use that to highlight the area you want to copy. The screen will flash, and then the picture will be copied to your clipboard.

And then what you can do is go into AHLTA in the "Add Note" feature. When you're in AHLTA, in the text portion, you can just paste it like you would any text, and what you'll see then is a picture version of what you've clipped from the PDF. So you can see there, that's what it would look like if you actually clipped text and drop it into AHLTA. And then that will now be saved along in the notes with everything else so that other people, members of your team can see the Mood Tracker results and you can avoid keeping it in your e-mail if that's a concern for you as a provider. You can share that with other team members.

So I think now we're going to move on to the question and answer session. Just briefly, here is our contact information. If there's anything we don't get to in the Q&A, please feel free to contact either myself or Dr. Workman. We're always available, always happy to take questions. So I think I'm going to turn it

over to Dr. Workman now who's been kind of moderating the questions. We'll start to get through some of the ones that you all have raised during my presentation.

Thank you for your presentation, Dr. Cooper. To the audience, if you have questions for Dr. Cooper, please feel free to continue submitting them through the question box. It's now time to answer questions from the audience. The question box has been monitored, and questions have been forwarded for response.

So, Dr. Cooper, the first question, "When I was in training as a psychologist the Web did not exist. Of course I use the Web all the time now, but I have not incorporated the use of websites into my clinical practice. Do you have some ideas how I can learn to competently use the Web in clinical care?"

Well, I think certainly, probably none of us are really taught this when we were getting clinically trained. I was just joking with my own parents the other day that I'm doing a job that didn't exist when I was in grad school, so how do you kind of plan for that? So things like the Web, though, are going to be more increasingly important in our professional and clinical lives.

So starting out with resources like the "For Dummies" books, there are a number of courses being held online, a number of websites being stood up, where people from around the world will teach different topics. I know I take advantage of those, and they're a good way to learn technologically kind of complex issues. It's really finding the resources that works for you, and there are just so many available. I certainly couldn't get into them all here.

Apple, for instance, if you have an iPad or an iPhone, Apple, in their stores, will actually offer free classes to come in and show you how to use your device. So you, as a provider, are kind of unsure how to use a Smart phone, there are resources like that available. There's really just a panoply of things that are out there. And so, like anything, it's finding the resources that are right for you and you feel work best for you.

Okay, Dr. Cooper, another question. "There seem to be two universes of devices we're talking about and technologies, one are the devices that are DOD approved and sit on my office desk, and the other are the kinds of tools that my patients may have or I may have from my personal life to augment what I do in therapy. Can you comment on the difference and the interaction between them?"

Well the difference is that there is very little interaction between them right now. Unfortunately this is one of those things where official federal policy lags behind actual -- what's available in the private sector. You know, getting something like a Fitbit or anything to work on an official DOD computer is challenging. So far I haven't found any providers who are unable to access the Fitbit website, so that's always an option. Some of these tool that is are more web-enabled or based on the web, you're going to be able to access that data more easier than something that maybe relies on an official smart phone or things of that nature. We're always hopeful here and working with folks in the DOD to kind of craft policies. I know that DISA recently put out their guidance for mobile devices that only covered a very limited amount, and that some of the newer Bluetooth functions, for instance, aren't even approved. So it really is, unfortunately, kind of a waiting game.

But at the same time, I didn't want to hamstring the presentation, because you will get people buying these devices on their own and bringing them into the session with you. So it also presents a nice opportunity for you to ask the patient how are they using it? Teach me about this device that you're using, fostering that therapeutic relationship so that you break down the idea of the clinician as the know-it-all, and really kind of have the patient teach you something for a change, which I think always helps improve the relationship.

This is Dr. Workman. There were a number of questions that came in, and let me try to summarize a number of issues. There were questions about data security, questions about HIPAA compliance and let me just comment on that. When you go from people who want to track their own personal information on their own personal phone into a government system like AHLTA, you are making some leaps, and you do need to make sure you policy approval and permission to do those things. A patient who comes into your

office and hands you a printout of their health data, for instance, it doesn't become protected health information until you as a provider hold it. Patients are allowed to collect whatever information they want on their phones. But one of the questions I think that maybe you can comment on is the security of data on their Smart phones. If patients are collected this information, is it secure?

Well it's no more or less secure then any other data on your smartphone, so that is something to keep in mind in working with patients. Our phones are really becoming -- and our devices and our computers, are really becoming more of a part of us, so it can be challenging to say, "Well let me see your phone." "You want to hold my phone? I don't give my phone out to anybody because you can look at my Facebook and my Twitter, and all those sorts of things." So it's something we're really trying to figure out.

Certainly, personal devices are not up to DOD security standards, so that's something to keep in mind. But I think, regardless of the regulations, the simple fact is, people are doing it. Whether or not it's secure or not or whether or not we have guidance, people are collecting this data on their own, and we as clinicians need to kind of respect that and understand how we can use that in our treatment, because that's what's going to be expected of us. You know, you can't say to a patient, "I'm sorry I can't deal with that, because of regulation 24678, and really have expect a good response from them.

Again, I wish that the legal part of things could keep up with the technological part of things, but that really is one of the challenges in using these kind of tools, is that the technology, at least for the foreseeable future, will always be ahead, so it kind of puts an extra step on you as a clinician to just kind of be cognizant of that and being kind of extra secure on your end to make sure this you are HIPAA compliant.

Another question, somebody wrote in and said, "I've been trying to download PE Coach and PTSD Coach on my iPad," and they're having trouble getting access to it. Any ideas why that might be?

Well, so sometimes with applications, when we make an application for Apple or an Android, there are certain limitations placed on us by both Apple and Google as far as what kinds of things the application can include, how it's designed. And so often what we have to do is make adjustments for different operating system versions. So older iPads may have different functions. There's also a difference between something that works on the iPhone versus the iPad, and, wherever possible, we try to make it compatible. I would just check to see if your iPad is using the latest version, updating everything to the most current version, uninstalling the applications and trying to download them again. Unfortunately this is another one of those technical challenges where we all have to kind of become our own tech support in a way with this new stuff. You know, we're all doing things that we never thought we would when we first started out.

Here's another question. "I like the concept of my patients having mobile apps on their smartphones to support clinical care, but I have one of those old-fashioned cell phones. How I can use mobile apps with my patients when I don't know much about using them. Well, for example, I mentioned those courses at Apple. I believe that you can -- I believe they're free for iPad users, but I think they may also be free for people that don't have iPads but just want to learn more about it. Apple stores, for example, you can just walk in, pick up an iPad and within 30 seconds, somebody will be over your shoulder offering to teach you how to use it.

Similarly, there are lots of online resources available. I know Google has a how-to about how to use Android. There may also be, you know, as we move towards kind of the behavioral home health model, you know, you may have someone in your clinic who is more tech savvy than you are who can kind of take the lead in teaching everybody how to use these things. You can also take the role of letting the service member teach you how to use it, enhancing their self efficacy. Let them be the authority, for example, on showing you how they use their iPhone. And, again, fostering not only that self efficacy but therapeutic relationship that you both are learning something together and bonding over an experience.

There's another question about the use of the MTBI mobile application that was earlier in the presentation. Is it would be useful for diagnostic purposes?

I wouldn't say it would be a replacement for anything that you're already using. If anything, it would just be another source of information for you to consider, particularly if you someone who has been using it before they came in to see you and has already said, "Hey, this app is telling me that I might have some PTSD or some other kinds of issues to deal with. Just like you would accept other medical referrals or other information from other clinical sources, I certainly don't want to hold any one person to, "Yes, you must use this for a diagnosis," or say that it will be a hundred percent accurate. Just treating it, I think, as one more source of clinically relevant information is important.

Okay, thank you. How many apps does T2 have that can be enabled for specific research studies?

Well right now I think we only have about three or four. What we're working on here at T2 is developing what we call our "research module," that we're actively putting into all of our applications. So if you or anyone in your clinic is interested in doing research on any of these apps in practice, what the research module will allow you to do is specifically enroll subjects in your research study, and then you, as the PI or as the investigator, will get data, not only about how the person is using the application, how many times they open the application, what they did, when they used the application, but as well as being able to collect some of the data within the application. Normally we don't make that available, again, because of the concerns about privacy and confidentiality. We try to keep that secure.

We also want to address service member concerns about stigma and make it very clear that we are not tracking their data unless we specifically say that they are in the context of a research study. So within our normal applications, we don't track an assessment in PTSD coach for example. That data is saved in the app, but it's not necessarily available unless I show it to you. However, with a research enrollment model, you will be able to get that sent to you from the patient from their device so that you can get, again, not only a picture of how they're using the application but what the results are from the application. We've got a nice manual, so if anyone is interested, please e-mail me, and I'm happy to send you our guide to our research enrollment. And, again, it's something we're actively putting in and working in as many applications as we have.

Thank you. Let me summarize. There were a number of questions asking about HIPAA, and it's actually the security rule that followed the privacy rule that is of relevance to security and the electronic systems. So let me just comment briefly. The security rule requires that electronic security be maintained at a significant level, and that's determined on an institutional basis. So until there are DOD-approved devices to send information directly into AHLTA, and there are some laboratory set up. I know TATRC is doing some work with that. We've had some pilot projects looking at ways to get data into AHLTA. Those will need to be officially sanctioned processes.

What Dave showed you previously in the PowerPoint was a way that you can capture information that somebody hands you and store that into AHLTA like you would another note or record. Once that information is stored in, that becomes protected health information. It does need to be in compliance with the security rule. But, again, a patient who is capturing their own personal information is not under the HIPAA for security rule regulations. And, again, I think that speaks to, again, how the technology is moving faster than the regulations and legislation can move.

You know, we want it to be able to provide that service for patients to be able to send their Mood Tracker data to a provider so I wouldn't necessarily have to come in and show you my phone every time and we're hunched over this tiny screen looking at my data. I wanted you to be able to have that a provider and use that as you see fit. But kind of the workaround we had to do was allowing the user to send it to you, as a posed to you being a provider and requesting that information.

There are lots of things that we can't do because of HIPAA that would make sense to do, and we really are trying to work hard to get things like Mood Tracker to directly integrate with the Behavioral Health database and all that, so that we really kind of close that loop and don't have to do any kind of workarounds in the system.

Dr. Cooper, what would you say are some of the limitations of the current mobile health technology?

Well, I think one particular limitation is that it's only as good as what's available, and what's available is only as good as you access to it. So, for example, if your installation can't access fitbit.com, you can't use Fitbit data with your patients or see their Fitbit data. If there's no mobile applications for, let's say, a specific issue, like, you know, we're constantly -- I'll take an example, we're thinking about, not only in terms of PTSD, we're thinking about not only anxiety reduction but nightmare reduction as well, which is a separate part of both PTSD and sleep. It's related, but it's not exactly the same and you don't treat it the same. There's not really any apps available for nightmare reduction, so you can't necessarily work that into your treatment if you want to lose a lot of these applications.

Again, it can be difficult to even figure out what applications available on the market are good to use. You know, it's really hit or miss. I compare it a lot to the idea of looking at journal articles. If you go to the app store, you can get kind of an abstract of an app to see what it does, but you really need to download the app and put it through its paces, just like you need to download a journal article and read it through, to determine whether it's any good. So there still really is no standardization. You know, I really wish there was just kind of some rubber stamp is this app is approved and it is evidence based and it is useful. But there really is nothing like that now, so, you know, if I haven't made it clear, really, this stuff is new and there really aren't a whole lot of guidelines to it, so it does because provider beware and puts the impetus on us. But, again, it's something that is up and coming and we do need to be aware of it.

One of the listeners wrote in and asked, "What was your provider's response when you brought in your data to a medical appointment?" They stated, "I've done that in the past and was disappointed by the disregard of the data by the provider. I'd love to see this outside data brought in by patients embraced by providers."

And I would too, and that's exactly why I love doing these kinds of presentations to health-care providers in general, to say this is something that patients do want to talk about with their clinicians, and you as a clinician, just as you would respect any other kind of information they bring into you, respecting this kind of information. You know, looking at things like the Fitbit and things like that for sleep, while you may be initially dismissive of it, one of the subject matter experts we work with here at T2 is specifically a researcher in sleep and is incredibly excited about the Fitbit for the very reasons I mentioned, and that's the problems you have with the Gold Standard Sleep Study, you know, to get you more ecologically valid data.

Is it something to base 100% of your clinical decision making on? No. But then no piece of data is. My provider was a little bit nonplussed and taken aback, but I felt more empowered as a patient to be able to assert things because I had data to back them up. Another thing personally that I've done is there are services that will do things like at-home blood testing or even scan your DNA, so I've got my genotype sequenced, and one of the nice things it provides me is recommendations on medication so I know whether I am a responder to things like Warfarin or not. I feel more empowered knowing that as a patient so that I can go to my doctor and say, "Listen, based on this study, this study, and this study and my genetic profile, I don't want to take Warfarin. I don't want to take beta interferon because it might hurt me." And I think as a provider, while you may be initially taken aback at that approach, it is more of a -- it is data that you do want to know. I think it's data we all want to know. We have to kind of get down off our high horses a little bit and embrace coming together in a partnership with our patient.

There was an additional comment made that there are local technology user groups, and the example put forward was apparently there's a Washington Apple Pi -- Apple, A-p-p-l-e, and then Pi, P-i -- in the Washington, D.C. area that has a webinar on mHealth devices and apps.

Great.

Can you comment on, or are you aware of other either user groups or technology user groups, especially that are clinically focused.

Sure. We here at T2 have set up a community of practice around after deployment and are working on it on mobile apps. We do that through LinkedIn, and kind of organize the group around LinkedIn. So if you're connected through that, you can request to become a part of that group, and we hold regular quarterly webinars on our own, talking with providers all throughout the military health system about how they're using after military deployment, what are they finding, what can we do better.

Another good resource that I have found are just kind of the websites like meetup.org where you can find local groups in your area around specific topic interests. Again, I think Dr. Workman said, part time, I organize the Quantified Self Meetup here in Seattle, again, looking at people who are tracking their own data. So through meetup.com, you know, we post when we 'going to have a meeting, we have people in a group, and we know that, you know this is a group for people who are around who are data health nerds who want to know about tracking their own data and what the latest gadgets are. There are Meetup groups like that all across the country, so finding groups in your area around those areas of interest can be very important, very helpful.

Thank you, Dr. Cooper. Another question has come in. "Do you recommend some kind of a blanket statement regarding the use of technology in clinical practice? Is there a template that might address the use of, again, these new technologies and some of the limits of confidentiality along the lines of a consent for treatment that a patient might sign?"

If I had one, I certainly would recommend one. I think this is something we're working internally. I know we're working on a provider manual for addressing these specific kinds of issues. So I don't think I have a template that I could send out, but I could certainly send around if you were interested in some of our own internal language. At least that's kind of preliminary of what we're kind of saying providers might want to use with patients. Again, as you can see, we're kind of in unknown waters here in terms of how this works with HIPAA, how this works within the military health system. I mean even the FDA just recently started saying, "Okay, now we're going to start screening apps and devices," and these things have been on the market and being used for two, three, four years now, and we're just getting around to that now at the federal government level.

So I don't think I could given you something that is quote, unquote, officially approved, but I'd certainly be happy to pass something your way that maybe gets you towards that, that you can stand up at your own clinic or with you own group to kind of talk amongst yourselves and kind of come up with your own internal guidelines until there is something official.

Well, thank you again, Dr. Cooper. We want to thank our presenter and mention to all of you that today's presentation will be archived in the monthly webinars section of the DCoE website. To help us to improve future webinars, we do encourage you to complete the feedback survey that has been opened in a separate browser on your computer, and that link is also available on the DCoE website. To access the presentation and the resource list for this webinar, please visit the DCoE website; that's dcoe.mil/webinars. An edited transcript of the closed captioning will be posted to that link. In addition, an audio recording of the webinar will also be available as a downloadable podcast.

Again, thank you for attending today's webinar. The next webinar to be hosted by DCoE is from DVBIC, and the title is "TBI Global Synapse Town Hall; Your TBI Information Connection." The webinar is scheduled for November 20th, 2013, from 2:30 to 4:30 p.m. Eastern Standard Time. Thank you again for attending and have a great day.

Thank you. That does conclude today's conference call. Thank you for your participation. You may disconnect your line at this time.